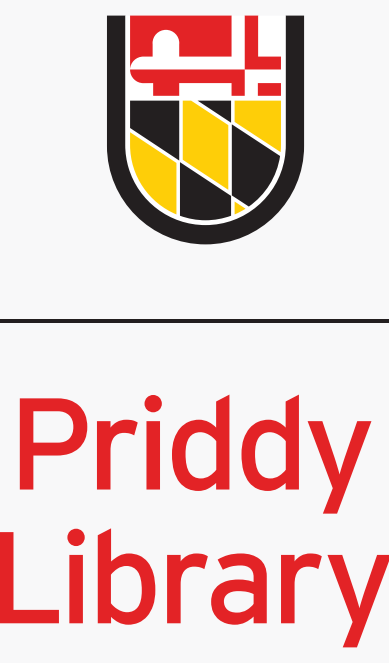




A BIBLIOMETRIC EXPLORATION OF LIS SCHOLARSHIP

Amy Trost, The Universities at Shady Grove/University of Maryland Libraries



INTRODUCTION

Librarians who practice bibliometrics are often asked to compare the research output of an academic department or research group to a larger body of scholarship. Here I explore techniques to address these requests with a case study examining the field of Library and Information Science (LIS). Scholarship around academic libraries is evaluated in two ways: broadly, and as produced by librarians within the University System of Maryland (USM).

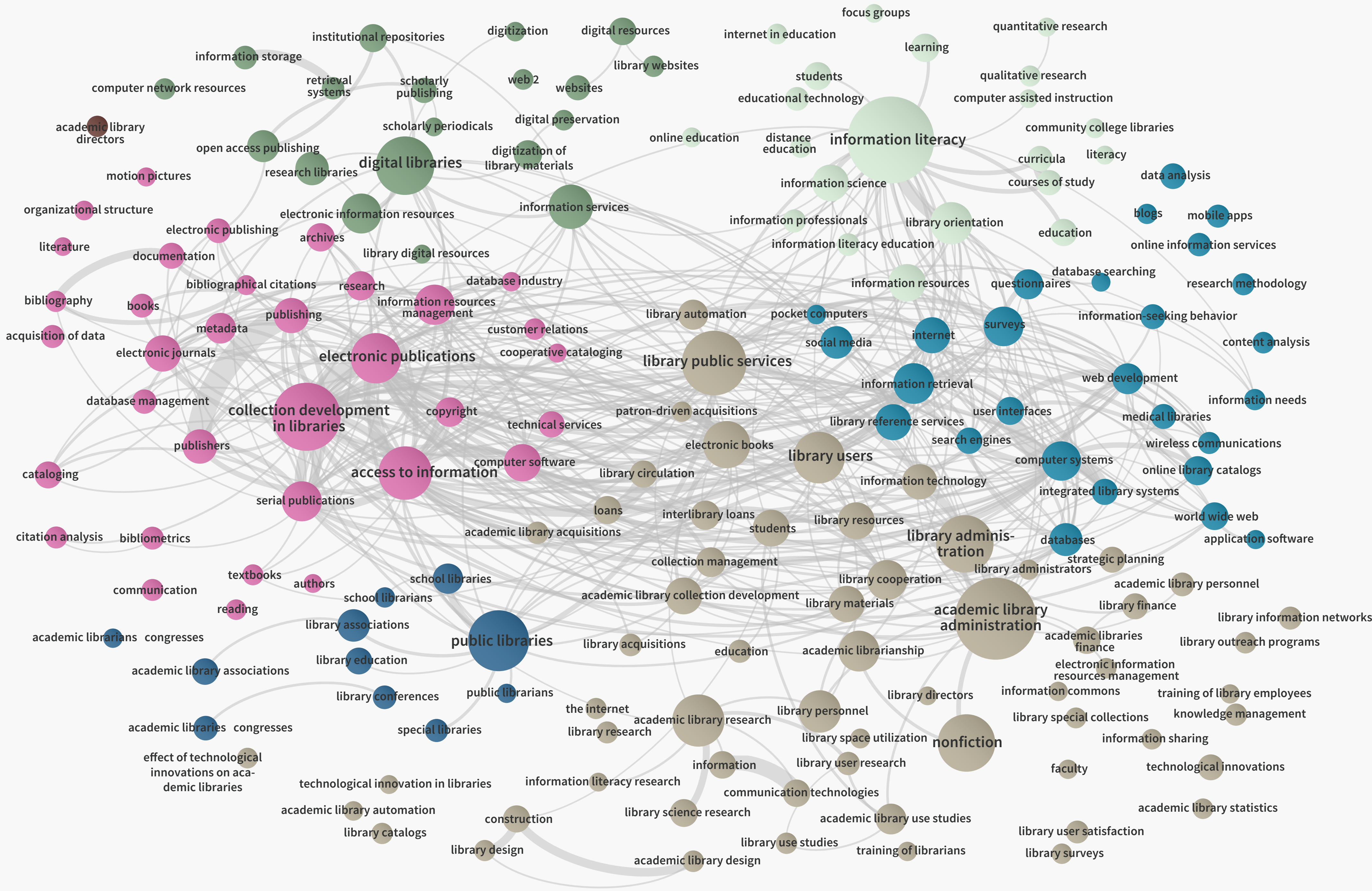
This analysis relies on bibliographic data from EBSCO's Library and Information Science Source (LISS) database for the time period of 2008-2019. 16,248 records related to the exploded “academic

libraries” subject heading were retrieved via bulk export. The analysis below explores the controlled vocabulary associated with these articles and endeavors to answer three questions:

- 1. Can the co-occurrence of thesaurus terms be used to map the research landscape around academic librarianship?
- 2. Are there trends in keyword usage over time?
- 3. How is the research focus of 140 published librarians in the University System of Maryland and Affiliated Institutions (USMAI) consortium different from the focus of the broader collection?

ACADEMIC LIBRARIANSHIP: THE RESEARCH LANDSCAPE

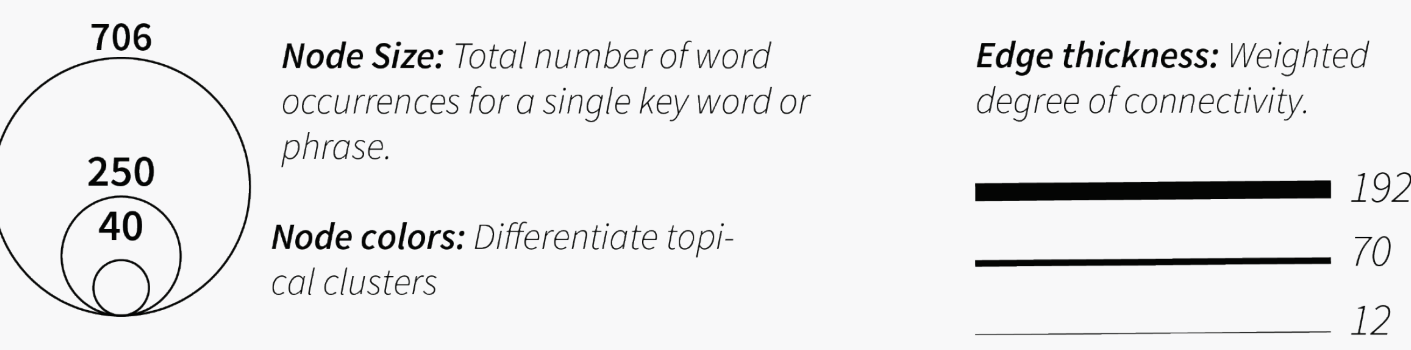
Co-occurrence of the most commonly assigned keywords related to academic librarianship, 2008-2019



A clustered network analysis (left) shows the 175 most commonly used thesaurus terms for the search result of 16,248 records. Roughly a dozen very common terms (e.g., libraries, academic librarians, etc.) were removed first. Six major clusters reveal some surprising connections among the sub-disciplines within academic & research librarianship.

Digital and technical services are scattered throughout all six clusters. Scholarly publishing and digitization is split between two clusters (deep green and light blue). Professional associations and conferences (dark blue) are linked with public libraries, while many of the terms associated with staffing and development are in a separate (brown) cluster. Information literacy, the largest node in the network, anchors a cluster (light green) that is strongly linked to library instruction and related topics.

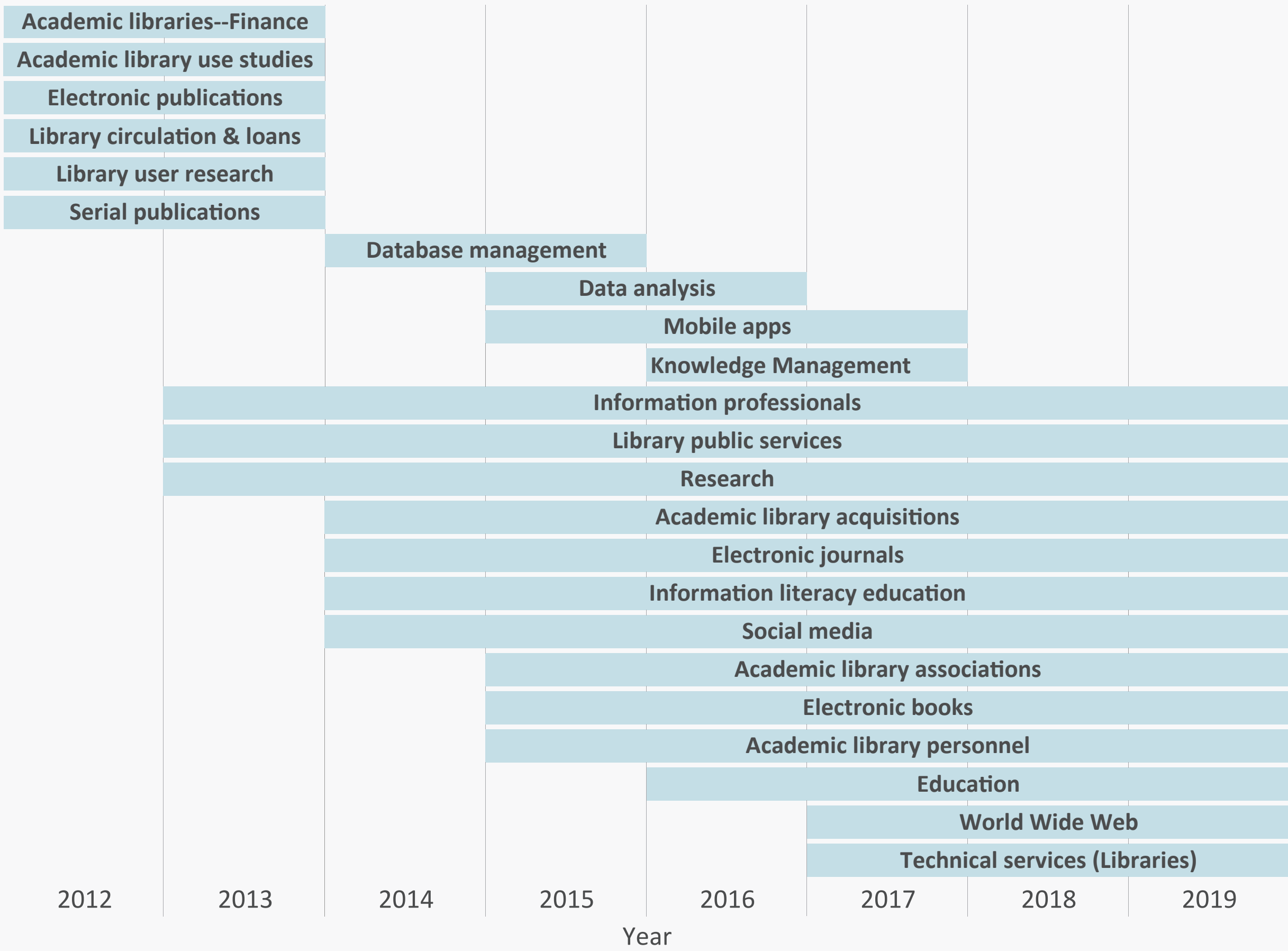
Network Legend



KEYWORD TRENDS

Burst detection algorithms identify periods of increased activity over time. The Sci2 tool identified 131 instances of increased keyword usage for the period from 2012-2019. The twenty-three most frequently used terms are pictured below. Along with the expected technology-related items, there are a few surprises on this list, including terms related to library associations and public services.

Keyword burst detection, 2012-2019




EVALUATING THE ROLE OF PRACTITIONERS


Below is a list of the most commonly assigned keywords for both USMAI authors and the full result set. Roughly two-thirds of the terms assigned USMAI authors are also in common general usage. Many of the terms exclusive to USMAI on this list are, unsurprisingly, more specialized (e.g., pocket computers, distance education).


A comparison of the most commonly assigned keywords

Both USMAI and General Paper Collection		USMAI Collection only	General Collection only
Academic library administration	Interlibrary loans	Academic library mergers	Academic librarianship
Academic library research	Library administration	Academic library personnel	Electronic information resources
Access to information	Library cooperation	Acquisition of data	Information resources
Collection development in libraries	Library public services	Distance education	Information resources management
Computer software	Library reference services	Documentation	Information retrieval
Copyright	Library science	Electronic information resources management	Information science
Digital libraries	Library users	Library reorganization	Information services
Education	Nonfiction	Literature	Library orientation
Electronic books	Public libraries	Pocket computers	Library personnel
Electronic journals	Social media	Videoconferencing	Library resources
Electronic publications	Strategic planning	Writing	Serial publications
Information literacy	Students		
Information-seeking behavior	Surveys		
Institutional repositories	Technical services (Libraries)		

TOOLS USED

 EBSCOhost’s **Library and Information Science Source (LISS)** database for bulk access to records and thesaurus terms in XML format

 **R Studio’s** xml library for reformatting LISS records and the tm (text mining) library for plotting the co-occurrence of keywords and phrases

 **Gephi** to create network visualizations and perform cluster analysis. Visualizations were further refined in **Adobe Illustrator**

 **Sci2** for burst detection of keywords and phrases